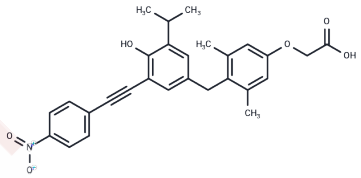
Data Sheet (Cat.No.T40548)

TargetMol

NH-3

Chemical Properties



CAS No. : 447415-26-1

Formula: C28H27NO6

Molecular Weight: 473.52

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	NH-3 is a potent orally active thyroid hormone receptor (THR) antagonist which exhibits reversible behavior, demonstrated by an IC 50 of 55 nM. Derived from the selective thyromi-metic GC-1, NH-3 effectively inhibits the binding of thyroid hormones to their respective receptors, resulting in hindered cofactor recruitment.
Targets(IC50)	Thyroid hormone receptor(THR)
In vivo	Administration of NH3 (46.2-27,700 nmol/kg/day; 7 days) modestly reduces heart rate beginning at a dose of 46.2 nmol/kg/day, with this effect dissipating at doses exceeding 2920 nmol/kg/day. NH3 does not influence the cholesterol-reducing properties of T3 at 46.2 nmol/kg/day. However, it does obstruct the increase in heart rate and suppression of TSH caused by T3 up to a dosage of 924 nmol/kg/day [2].

Solubility Information

Solubility	DMSO: 95 mg/mL (200.63 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (6.97 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1118 mL	10.5592 mL	21.1184 mL
5 mM	0.4224 mL	2.1118 mL	4.2237 mL
10 mM	0.2112 mL	1.0559 mL	2.1118 mL
50 mM	0.0422 mL	0.2112 mL	0.4224 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Latika Singh, et al. Chasing the Elusive Benzofuran Impurity of the THR Antagonist NH-3: Synthesis, Isotope Labeling, and Biological Activity. J Org Chem. 2016 Mar 4;81(5):1870-6.
Gary J Grover, et al. Pharmacological profile of the thyroid hormone receptor antagonist NH3 in rats. J Pharmacol Exp Ther. 2007 Jul;322(1):385-90.
Wayland Lim, et al. A thyroid hormone antagonist that inhibits thyroid hormone action in vivo. J Biol Chem. 2002 Sep 20;277(38):35664-70.